

## **RE2 –09/10**

### **N1101.2-N1101.9, N1102 and N1103**

**Proponent:** Jeff Harris, Alliance to Save Energy and Ronald Majette, US Department of Energy

#### **1. Revise as follows:**

**N1101.2 Compliance.** Compliance shall be demonstrated by ~~either meeting the requirements of the *International Energy Conservation Code* or meeting the requirements of this chapter.~~ ~~Climate zones from Figure N1101.2 or Table N1101.2 shall be used in determining the applicable requirements from this chapter.~~ For consistency and convenience, the relevant administrative provisions, supplemental definitions, prescriptive and mandatory requirements of the *IECC* applicable to buildings regulated by this code are reprinted below. For the Simulated Performance Alternative, buildings regulated by this code shall comply with *IECC* Section 405. Solely for the purpose of compliance with this section, in the event of any conflicts in definitions or referenced standards between the *IECC* and *IRC*, the respective definition or referenced standard from the *IECC* shall control.

**2. Delete Sections N1101.2.1-N1101.9, N1102 and N1103 in their entirety (including all tables), and reprint the following sections of the IECC, coordinated with the section numbering of the IRC:**

- (1) *IECC* Chapter 1 Administration (all Sections, except Sections 101.1-101.2, 101.4.6, and 101.5)
- (2) *IECC* Chapter 2 Definitions (all Sections)
- (3) *IECC* Chapter 3 Climate Zones (all Sections)
- (4) *IECC* Chapter 4 Residential Energy Efficiency (Sections 401-404)
- (5) *IECC* Chapter 6 Referenced Standards (All Standards).

**Reason (Harris) :** This proposal is intended to permanently resolve the growing inconsistencies between the *IECC* (which is referenced by the *IBC*) and the *IRC* by referencing a single set of energy efficiency requirements for all three codes (the *IECC*) and reprinting those requirements directly in Chapter 11 of the *IRC*. The proposal also makes code compliance and enforcement more uniform and streamlined.

**The Problem.** The problem of an inconsistent *IRC* and *IECC*, where the *IRC* energy provisions are weaker and less rigorous than the *IECC*, is well-known. The *IECC* and *IRC* are reviewed by two different code development committees. Proposals must be heard twice (using substantially more resources and prolonging the hearings by days), and the outcome is frequently different. It is then up to the code officials at the Final Action Hearing to sort through the two committees' differing opinions and decide on the best course. As long as there are two codes and two committees, inconsistency will continue to grow, creating problems for jurisdictions that seek to implement a single set of energy efficiency requirements for residential buildings.

**The Solution.** This proposal presents a reasonable long-term solution for code consistency and uniform enforcement. Just as *IBC* Chapter 13 references the *IECC* for its energy efficiency requirements, *IRC* Chapter 11 would reference the *IECC*. To preserve the convenience of a single-volume residential code, ICC would reprint the relevant sections of the *IECC* in chapter 11 of the *IRC*. In subsequent cycles, as the *IECC* is updated, the *IRC* Chapter 11 would be automatically (and identically) updated by virtue of the reference to the *IECC*.

The general approach of replacing the *IRC* energy chapter with the *IECC* has already been tested in several states. In fact, the *IRC* already references the *IECC* for the performance path (N1101.2), so any state that adopts the *IRC* already automatically adopts the requirements of the *IECC* as a compliance option. Several states have already taken the step suggested by this proposal by exclusively referencing the *IECC* for energy efficiency requirements. The new appendix will add even more convenience to this solution.

**The IECC is the Best Single Energy Efficiency Standard.** The *IECC* is recognized in federal law and nationwide as the comprehensive model energy code for all residential and commercial buildings. More than two thirds of states have adopted the *IECC* as their mandatory statewide energy code. National, state and local policymakers are demanding a substantially improved level of energy efficiency in building energy codes to meet the nation's security, environmental and energy cost needs. At the same time, building officials demand uniformity and consistency in the International family of codes.

Under the federal Energy Policy Act of 1992, the US Department of Energy (DOE) is required to review each new version of the *IECC* and determine if it is an improvement in energy efficiency over previous versions. (*IRC* Chapter 11 does not undergo such a rigorous assessment by DOE, so it is not clear whether it would meet the same high standard for energy efficiency improvement.) States are also required by federal law to undertake a review of the state energy code and determine whether state energy efficiency requirements meet the stringency of the *IECC* every time the Department of Energy makes a determination on the updated *IECC*.

The *IECC* also serves as the basis for federal tax credits for energy efficient homes, energy efficiency standards for federal buildings, and qualification for FHA mortgages. The *IECC* is also referenced in LEED and many other state and federal programs.

Most recently, the adoption of the 2009 *IECC* was designated by Congress as a threshold requirement for states to receive \$3.2 billion in State Energy Program funds through the American Recovery and Reinvestment Act (Stimulus Bill). None of these programs even references the *IRC*. For all these reasons, the *IECC* is the logical selection as the single energy efficiency standard for the International Codes.

**The Benefits of the IECC as the Single Energy Efficiency Standard**

- **True Consistency.** This proposal fixes inconsistencies between the *IRC* and the *IECC/IBC* that have developed over time, and ensures consistency in the future. Even if all code change proposals in the current cycle were 100% consistent, the *IECC* and *IRC* would still be different because of changes made in earlier editions, and would likely be different in the future because two separate committees are reviewing the same code language.

This proposal does not expand or reduce the number of compliance options available to builders. It simply consolidates them in the most reasonable place. The energy efficiency requirements of the *IBC*, *IRC* and *IECC* would be unified into a single set of requirements that comply with all three codes and ensures that all three codes meet the same energy efficiency and building quality standards in the future.

- **Proposals Reviewed and Approved By a Balanced Committee of Experts.** The *IECC* is currently developed by a committee that it is populated by experts in building energy efficiency and where no organization has more than one voting seat.
- **Streamlined Enforcement.** Once all three I-codes have a unified set of energy efficiency requirements, enforcement will become much simpler. A builder complying with the *IRC* Chapter 11 will automatically meet the requirements of the *IBC* and *IECC*. Builders will only need to follow one set of requirements, and code officials can enforce a single set of requirements.

**Less Complicated Code Hearings.** This proposal would eliminate a good deal of redundancy in the current code development process by centralizing the energy efficiency requirements in a single committee. Rather than force proponents and code officials to endure hours – even days – of the same testimony before two different committees, this proposal would streamline the process and yield a more consistent result.

**Reason (Majette):** The proposed change is intended to eliminate inconsistencies between the *IECC* and *IRC*, the two primary codes that relate to residential buildings, and reduce the significant burden of maintaining two similar but not quite identical codes in the ICC's code development process. It does so by eliminating the nearly duplicative provisions of *IRC* Chapter 11 and replacing them with a reference to the *IECC*.

This approach is consistent with the way the *IBC* (Chapter 13) references the *IECC* for energy efficiency requirements, but to accommodate residential builders' need for a single-volume code solution, the portions of the *IECC* relevant to one- and two-family dwellings and townhouses three stories or less above grade will be reprinted for convenience in place of the current Chapter 11 text.

The consolidation of the ICC's two residential energy efficiency codes around the *IECC* is appropriate for the following reasons:

- The *IECC* is the unambiguous standard of reference that DOE, by Congressional mandate, establishes for its energy code determinations. The Energy Policy Act of 1992 (EPA-92) requires DOE to evaluate each new version of the *IECC* to determine whether it will save energy in residences. Because the *IRC* energy chapter differs in substantive ways from the *IECC*, DOE is unable to recognize it as an equivalent code.

- The IECC is the unambiguous standard of reference for DOE's evaluations of state energy codes. EAct-92 requires that states, following any DOE determination that a new version of the IECC saves energy, certify to DOE whether it is appropriate to upgrade their code(s) to meet or exceed that new IECC version.
- The IECC is the predominant residential building energy code in the U.S. About two-thirds of the states reference or are based on some version of the IECC.
- The IECC is the predominant standard of reference for residential above-code programs in the U.S. It serves as the baseline for federal tax credits for energy efficient homes, energy efficiency standards for federal buildings, and qualification for FHA mortgages. It is also referenced in LEED and many other state and federal programs and has been used as the primary source for baseline assumptions in RESNET's home energy rating systems.
- The IECC is the unambiguous threshold for states seeking State Energy Program funds made available by the American Recovery and Reinvestment Act of 2009.
- Because the IRC currently lags behind the IECC in overall energy efficiency, DOE cannot provide compliance tools and support for states that adopt it.
- Maintaining both the IECC and the IRC energy chapter in the ICC's code development process represents a near doubling of efforts by interested parties and ICC staff, with the typical outcome that the IRC energy chapter cannot be used in any of the programs listed above.

This proposal would eliminate the duplicative efforts, eliminate confusion within state governments, streamline code enforcement and the necessary training and tool development, lessen the bureaucratic load on the U.S. DOE, guarantee true consistency between the IECC and the IRC, and sustain the availability of the IRC as a single-volume residential code.

**Cost Impact:** The code change proposal will increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

ICCFILENAME: HARRIS-RE-1-MAJETTE-RE-1-N1101.2, N1101.9